

IN THE CLAIMS:

Please CANCEL claims 1-6 without prejudice to or disclaimer of the recited subject matter.

Please ADD claims 7-17 as follows. Please note that all claims currently pending in this application are reproduced below for the Examiner's convenience.

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (New) An exposure apparatus, comprising:  
an exposure light source;

an optical system which directs exposure light from said exposure light source to a photosensitive substrate;

a casing which accommodates therein at least one optical element of said optical system;

a gas replacing system which supplies a purge gas into said casing to replace a gas inside said casing with the purge gas; and

a control system which controls said gas replacing system so as to increase a flow rate of the purge gas if a predetermined time elapses after an exposure is completed and before a next exposure starts.

8. (New) An apparatus according to Claim 7, wherein said control system controls said gas replacing system so as to decrease the flow rate of the purge gas after the flow rate of the purge gas is increased and before the next exposure starts.

9. (New) An apparatus according to Claim 8, wherein said control system controls said gas replacing system so as to decrease the flow rate of the purge gas when said control system receives information of a start of exposure.

10. (New) An apparatus according to Claim 7, wherein said exposure light source comprises an excimer laser.

11. (New) An apparatus according to Claim 7, wherein the purge gas is an inactive gas.

12. (New) A purging method adapted for use in an exposure apparatus having an exposure light source, an optical system which directs exposure light from the exposure light source to a photosensitive substrate, a casing which accommodates therein at least one optical element of the optical system, and a gas replacing system which supplies a purge gas into the casing to replace a gas inside the casing with the purge gas, said method comprising:

a first step of controlling the gas replacing system so as to increase a flow rate of the purge gas if a predetermined time elapses after an exposure is completed and before a next exposure starts; and

a second step of controlling the gas replacing system so as to decrease the flow rate of the purge gas after the flow rate of the purge gas is increased and before the next exposure starts.

13. (New) A method according to Claim 12, wherein, in said first step, the gas replacing system is controlled by a control system so as to increase the flow rate of purged gas if the predetermined time elapses after the control system receives information of completion of exposure and before the control system receives information of start of exposure.

14. (New) A method according to Claim 12, wherein, in said second step, the gas replacing system is controlled by a control system so as to decrease the flow rate of purged gas if the control system receives information of start of exposure.

15. A method according to Claim 12, wherein the exposure light is ultraviolet light.

16. A method according to Claim 12, wherein the purge gas is an inactive gas.

17. A device manufacturing method, comprising the steps of:

exposing a photosensitive substrate to a pattern by use of an exposure apparatus including: an exposure light source, an optical system which directs exposure light from the exposure light source to a photosensitive substrate, a casing which accommodates therein at least one optical element of the optical system, a gas replacing system which supplies a purge gas into the casing to replace a gas inside the casing with the purge gas, and a control system which controls the gas replacing system so as to increase a flow rate of the purge gas if a predetermined time elapses after an exposure is completed and before a next exposure starts; and

developing the photosensitive substrate exposed in said exposing step.